

# Marina Galand

## List of Publications by Year in descending order

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126  
papers

4,607  
citations

76326

40  
h-index

118850

62  
g-index

135  
all docs

135  
docs citations

135  
times ranked

3487  
citing authors

#	ARTICLE	IF	CITATIONS
1	AMBITION " comet nucleus cryogenic sample return. <i>Experimental Astronomy</i> , 2022, 54, 1077-1128.	3.7	4
2	Cometary plasma science. <i>Experimental Astronomy</i> , 2022, 54, 1129-1167.	3.7	3
3	Energy deposition in Saturn's equatorial upper atmosphere. <i>Icarus</i> , 2022, 372, 114724.	2.5	7
4	Science goals and new mission concepts for future exploration of Titan's atmosphere, geology and habitability: titan POLar scout/orbitEr and in situ lake lander and DrONE explorer (POSEIDON). <i>Experimental Astronomy</i> , 2022, 54, 911-973.	3.7	5
5	Multi-instrument analysis of far-ultraviolet aurora in the southern hemisphere of comet 67P/Churyumov-Gerasimenko. <i>Astronomy and Astrophysics</i> , 2021, 647, A119.	5.1	6
6	Far-ultraviolet aurora identified at comet 67P/Churyumov-Gerasimenko. <i>Nature Astronomy</i> , 2020, 4, 1084-1091.	10.1	11
7	Simulations of ion sputtering at Ganymede. <i>Icarus</i> , 2020, 351, 113918.	2.5	14
8	Field-Aligned Photoelectron Energy Peaks at High Altitude and on the Nightside of Titan. <i>Journal of Geophysical Research E: Planets</i> , 2020, 125, e2019JE006252.	3.6	5
9	Ionospheric total electron content of comet 67P/Churyumov-Gerasimenko. <i>Astronomy and Astrophysics</i> , 2020, 635, A51.	5.1	3
10	Electron dynamics near diamagnetic regions of comet 67P/Churyumov-Gerasimenko. <i>Planetary and Space Science</i> , 2020, 187, 104924.	1.7	4
11	Constraining Ganymede's neutral and plasma environments through simulations of its ionosphere and Galileo observations. <i>Icarus</i> , 2020, 343, 113691.	2.5	12
12	ROSINA ion zoo at Comet 67P. <i>Astronomy and Astrophysics</i> , 2020, 642, A27.	5.1	14
13	The Evolution of the Electron Number Density in the Coma of Comet 67P at the Location of Rosetta from 2015 November through 2016 March. <i>Astrophysical Journal</i> , 2019, 881, 6.	4.5	7
14	Building a Weakly Outgassing Comet from a Generalized Ohm's Law. <i>Physical Review Letters</i> , 2019, 123, 055101.	7.8	21
15	Modelling $H^{3+}$ in planetary atmospheres: effects of vertical gradients on observed quantities. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2019, 377, 20190067.	3.4	10
16	Comparative study of photo-produced ionosphere in the close environment of comets. <i>Astronomy and Astrophysics</i> , 2019, 630, A47.	5.1	15
17	First 3D test particle model of Ganymede's ionosphere. <i>Icarus</i> , 2019, 330, 42-59.	2.5	19
18	Plasma properties of suprathermal electrons near comet 67P/Churyumov-Gerasimenko with Rosetta. <i>Astronomy and Astrophysics</i> , 2019, 630, A42.	5.1	18

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19	Influence of collisions on ion dynamics in the inner comae of four comets. <i>Astronomy and Astrophysics</i> , 2019, 630, A48.	5.1	4
20	Solar wind charge exchange in cometary atmospheres. <i>Astronomy and Astrophysics</i> , 2019, 630, A37.	5.1	21
21	Plasma source and loss at comet 67P during the Rosetta mission. <i>Astronomy and Astrophysics</i> , 2018, 618, A77.	5.1	38
22	Saturn's Ionosphere. , 2018, , 196-223.		3
23	A chemical survey of exoplanets with ARIEL. <i>Experimental Astronomy</i> , 2018, 46, 135-209.	3.7	249
24	Cometary plasma response to interplanetary corotating interaction regions during 2016 June–September: a quantitative study by the Rosetta Plasma Consortium. <i>Monthly Notices of the Royal Astronomical Society</i> , 2018, 480, 4544-4556.	4.4	26
25	On the origin of molecular oxygen in cometary comae. <i>Nature Communications</i> , 2018, 9, 2580.	12.8	22
26	Vertical structure of the near-surface expanding ionosphere of comet 67P probed by Rosetta. <i>Monthly Notices of the Royal Astronomical Society</i> , 2017, 469, S118-S129.	4.4	39
27	Effective ion speeds at $\sim 1/4200 \sim 250$ km from comet 67P/Churyumov-Gerasimenko near perihelion. <i>Monthly Notices of the Royal Astronomical Society</i> , 2017, 469, S142-S148.	4.4	29
28	Diamagnetic region(s): structure of the unmagnetized plasma around Comet 67P/CG. <i>Monthly Notices of the Royal Astronomical Society</i> , 2017, 469, S372-S379.	4.4	51
29	Ion composition at comet 67P near perihelion: Rosetta observations and model-based interpretation. <i>Monthly Notices of the Royal Astronomical Society</i> , 2017, 469, S427-S442.	4.4	28
30	Evolution of the ion environment of comet 67P during the Rosetta mission as seen by RPC-ICA. <i>Monthly Notices of the Royal Astronomical Society</i> , 2017, 469, S252-S261.	4.4	55
31	Sources of Ionospheric Variability at Mars. <i>Journal of Geophysical Research: Space Physics</i> , 2017, 122, 9670-9684.	2.4	40
32	Effects of the convective field on weakly outgassing comets. <i>Monthly Notices of the Royal Astronomical Society</i> , 2017, 469, S824-S841.	4.4	2
33	Effect of stellar flares on the upper atmospheres of HD 189733b and HD 209458b. <i>Astronomy and Astrophysics</i> , 2017, 608, A75.	5.1	26
34	Impact of a cometary outburst on its ionosphere. <i>Astronomy and Astrophysics</i> , 2017, 607, A34.	5.1	21
35	EUV-driven ionospheres and electron transport on extrasolar giant planets orbiting active stars. <i>Astronomy and Astrophysics</i> , 2016, 587, A87.	5.1	19
36	RPC observation of the development and evolution of plasma interaction boundaries at 67P/Churyumov-Gerasimenko. <i>Monthly Notices of the Royal Astronomical Society</i> , 2016, 462, S9-S22.	4.4	62

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37	MODEL-OBSERVATION COMPARISONS OF ELECTRON NUMBER DENSITIES IN THE COMA OF 67P/CHURYUMOV-GERASIMENKO DURING 2015 JANUARY. <i>Astronomical Journal</i> , 2016, 152, 59.	4.7	24
38	Ion chemistry in the coma of comet 67P near perihelion. <i>Monthly Notices of the Royal Astronomical Society</i> , 2016, 462, S67-S77.	4.4	28
39	SUPRATHERMAL ELECTRONS IN TITAN'S SUNLIT IONOSPHERE: MODEL-OBSERVATION COMPARISONS. <i>Astrophysical Journal</i> , 2016, 826, 131.	4.5	8
40	The 2016 Feb 19 outburst of comet 67P/CG: an ESA Rosetta multi-instrument study. <i>Monthly Notices of the Royal Astronomical Society</i> , 2016, 462, S220-S234.	4.4	60
41	Ionospheric plasma of comet 67P probed by Rosetta at 3 Åu from the Sun. <i>Monthly Notices of the Royal Astronomical Society</i> , 2016, 462, S331-S351.	4.4	75
42	PREDICTION OF FORBIDDEN ULTRAVIOLET AND VISIBLE EMISSIONS IN COMET 67P/CHURYUMOV-GERASIMENKO. <i>Astrophysical Journal</i> , 2016, 818, 102.	4.5	5
43	Auroral Processes at the Giant Planets: Energy Deposition, Emission Mechanisms, Morphology and Spectra. <i>Space Sciences Series of ISSI</i> , 2016, , 99-179.	0.0	0
44	ON THE ELECTRON-TO-NEUTRAL NUMBER DENSITY RATIO IN THE COMA OF COMET 67P/CHURYUMOV-GERASIMENKO: GUIDING EXPRESSION AND SOURCES FOR DEVIATIONS. <i>Astrophysical Journal</i> , 2015, 812, 54.	4.5	31
45	The EChO science case. <i>Experimental Astronomy</i> , 2015, 40, 329-391.	3.7	31
46	Influence of local ionization on ionospheric densities in Titan's upper atmosphere. <i>Journal of Geophysical Research: Space Physics</i> , 2015, 120, 5899-5921.	2.4	10
47	ROSINA/DFMS and IES observations of 67P: Ion-neutral chemistry in the coma of a weakly outgassing comet. <i>Astronomy and Astrophysics</i> , 2015, 583, A2.	5.1	43
48	Time variability and heterogeneity in the coma of 67P/Churyumov-Gerasimenko. <i>Science</i> , 2015, 347, aaa0276.	12.6	222
49	The electron thermal structure in the dayside Martian ionosphere implied by the MGS radio occultation data. <i>Journal of Geophysical Research E: Planets</i> , 2015, 120, 278-286.	3.6	22
50	Day-to-night transport in the Martian ionosphere: Implications from total electron content measurements. <i>Journal of Geophysical Research: Space Physics</i> , 2015, 120, 2333-2346.	2.4	38
51	ON THE POSSIBILITY OF SIGNIFICANT ELECTRON DEPLETION DUE TO NANOGRAIN CHARGING IN THE COMA OF COMET 67P/CHURYUMOV-GERASIMENKO NEAR PERIHELION. <i>Astrophysical Journal</i> , 2015, 798, 130.	4.5	15
52	XUV-driven mass loss from extrasolar giant planets orbiting active stars. <i>Icarus</i> , 2015, 250, 357-367.	2.5	123
53	N <sub>2</sub> state population in Titan's atmosphere. <i>Icarus</i> , 2015, 260, 29-59.	2.5	15
54	Ionization balance in Titan's nightside ionosphere. <i>Icarus</i> , 2015, 248, 539-546.	2.5	22

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55	Saturn ring rain: Model estimates of water influx into Saturn's atmosphere. <i>Icarus</i> , 2015, 245, 355-366.	2.5	35
56	Auroral Processes at the Giant Planets: Energy Deposition, Emission Mechanisms, Morphology and Spectra. <i>Space Science Reviews</i> , 2015, 187, 99-179.	8.1	86
57	Titan's ionosphere. , 2014, , 376-418.		16
58	INCREASING POSITIVE ION NUMBER DENSITIES BELOW THE PEAK OF ION-ELECTRON PAIR PRODUCTION IN TITAN'S IONOSPHERE. <i>Astrophysical Journal</i> , 2014, 786, 69.	4.5	9
59	Numerical simulations of ion and electron temperatures in the ionosphere of Mars: Multiple ions and diurnal variations. <i>Icarus</i> , 2014, 227, 78-88.	2.5	60
60	Auroral electron precipitation and flux tube erosion in Titan's upper atmosphere. <i>Icarus</i> , 2013, 226, 186-204.	2.5	20
61	On the thermal electron balance in Titan's sunlit upper atmosphere. <i>Icarus</i> , 2013, 223, 234-251.	2.5	35
62	Aerosol growth in Titan's ionosphere. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 2729-2734.	7.1	126
63	Current-voltage relation for the Saturnian system. <i>Journal of Geophysical Research: Space Physics</i> , 2013, 118, 3214-3222.	2.4	16
64	PREDICTIONS OF ION PRODUCTION RATES AND ION NUMBER DENSITIES WITHIN THE DIAMAGNETIC CAVITY OF COMET 67P/CHURYUMOV-GERASIMENKO AT PERIHELION. <i>Astrophysical Journal</i> , 2013, 772, 33.	4.5	51
65	Characterizing the limitations to the coupling between Saturn's ionosphere and middle magnetosphere. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	14
66	EChO. <i>Experimental Astronomy</i> , 2012, 34, 311-353.	3.7	98
67	The CH <sub>4</sub> structure in Titan's upper atmosphere revisited. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	61
68	Diurnal variation of electron density in Saturn's ionosphere: Model comparisons with Saturn Electrostatic Discharge (SED) observations. <i>Icarus</i> , 2012, 221, 508-516.	2.5	12
69	Magnetosphere-atmosphere coupling at Saturn: 1 Response of thermosphere and ionosphere to steady state polar forcing. <i>Icarus</i> , 2012, 221, 481-494.	2.5	50
70	EnVision: taking the pulse of our twin planet. <i>Experimental Astronomy</i> , 2012, 33, 337-363.	3.7	23
71	Uranus Pathfinder: exploring the origins and evolution of Ice Giant planets. <i>Experimental Astronomy</i> , 2012, 33, 753-791.	3.7	44
72	The Rosetta campaign to detect an exosphere at Lutetia. <i>Planetary and Space Science</i> , 2012, 66, 165-172.	1.7	9

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73	Suprathermal electron spectra in the Venus ionosphere. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	21
74	Response of Saturn's auroral ionosphere to electron precipitation: Electron density, electron temperature, and electrical conductivity. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	50
75	Simultaneous Cassini VIMS and UVIS observations of Saturn's southern aurora: Comparing emissions from H, H <sub>2</sub> and H <sub>3</sub> <sup>+</sup> at a high spatial resolution. Geophysical Research Letters, 2011, 38, .	4.0	37
76	Separating and quantifying ionospheric responses to proton and electron precipitation over Svalbard. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	3
77	The implications of the H <sub>2</sub> variability in Titan's exosphere. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	20
78	Energy deposition and primary chemical products in Titan's upper atmosphere. Icarus, 2011, 213, 233-251.	2.5	121
79	Aurora on Jupiter: A Magnetic Connection with the Sun and the Medicean Moons. Proceedings of the International Astronomical Union, 2010, 6, 71-79.	0.0	0
80	The science of EChO. Proceedings of the International Astronomical Union, 2010, 6, 359-370.	0.0	5
81	Ion transport in Titan's upper atmosphere. Journal of Geophysical Research, 2010, 115, .	3.3	38
82	Ionization sources in Titan's deep ionosphere. Journal of Geophysical Research, 2010, 115, .	3.3	44
83	Latitudinal variations in Saturn's ionosphere: Cassini measurements and model comparisons. Journal of Geophysical Research, 2010, 115, .	3.3	55
84	Response of Saturn's ionosphere to solar radiation: Testing parameterizations for thermal electron heating and secondary ionization processes. Planetary and Space Science, 2009, 57, 1699-1705.	1.7	25
85	TandEM: Titan and Enceladus mission. Experimental Astronomy, 2009, 23, 893-946.	3.7	77
86	Negative ion chemistry in Titan's upper atmosphere. Planetary and Space Science, 2009, 57, 1558-1572.	1.7	240
87	On the ionospheric structure of Titan. Planetary and Space Science, 2009, 57, 1821-1827.	1.7	119
88	On the amount of heavy molecular ions in Titan's ionosphere. Planetary and Space Science, 2009, 57, 1857-1865.	1.7	96
89	Diurnal variations of Titan's ionosphere. Journal of Geophysical Research, 2009, 114, .	3.3	69
90	Heliophysics: A Field With Its Own Universal Laws?: AGU Chapman Conference on Universal Heliophysical Processes; Savannah, Georgia, 10-14 November 2008. Eos, 2009, 90, 131.	0.1	0

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91	Solar primary and secondary ionization at Saturn. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	48
92	Cross Sections and Reaction Rates for Comparative Planetary Aeronomy. <i>Space Science Reviews</i> , 2008, 139, 63-105.	8.1	74
93	Energy Deposition in Planetary Atmospheres by Charged Particles and Solar Photons. <i>Space Science Reviews</i> , 2008, 139, 3-62.	8.1	77
94	Spectral morphology of the X-ray emission from Jupiter's aurorae. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	75
95	Plasma temperatures in Saturn's ionosphere. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	41
96	Cross Sections and Reaction Rates for Comparative Planetary Aeronomy. <i>Space Sciences Series of ISSI</i> , 2008, , 63-105.	0.0	2
97	Energy Deposition in Planetary Atmospheres by Charged Particles and Solar Photons. <i>Space Sciences Series of ISSI</i> , 2008, , 3-62.	0.0	3
98	On magnetospheric electron impact ionisation and dynamics in Titan's ram-side and polar ionosphere – a Cassini case study. <i>Annales Geophysicae</i> , 2007, 25, 2359-2369.	1.6	78
99	Electron temperature of Titan's sunlit ionosphere. <i>Geophysical Research Letters</i> , 2006, 33, .	4.0	61
100	First ground-based optical analysis of H <sub>2</sub> Doppler profiles close to local noon in the cusp. <i>Annales Geophysicae</i> , 2006, 24, 2543-2552.	1.6	9
101	Proton aurora observed from the ground. <i>Journal of Atmospheric and Solar-Terrestrial Physics</i> , 2006, 68, 1488-1501.	1.6	23
102	Observation of O <sup>+</sup> (<sup>4</sup>P-<sup>4</sup>D<sup>0</sup>) lines in electron aurora over Svalbard. <i>Annales Geophysicae</i> , 2004, 22, 2805-2817.	1.6	5
103	Observation of O <sup>+</sup> 4P-4D <sup>0</sup> lines in proton aurora over Svalbard. <i>Geophysical Research Letters</i> , 2004, 31, n/a-n/a.	4.0	5
104	Spectral imaging of proton aurora and twilight at Tromsø, Norway. <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	18
105	Contribution of proton precipitation to space-based auroral FLUV observations. <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	24
106	High resolution measurements and modeling of auroral hydrogen emission line profiles. <i>Annales Geophysicae</i> , 2003, 21, 1629-1643.	1.6	11
107	Electron and proton aurora observed spectroscopically in the far ultraviolet. <i>Journal of Geophysical Research</i> , 2002, 107, SIA 14-1.	3.3	28
108	Auroral processes in the solar system. <i>Geophysical Monograph Series</i> , 2002, , 55-76.	0.1	15

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109	Ionospheric electrical conductances produced by auroral proton precipitation. Journal of Geophysical Research, 2001, 106, 117-125.	3.3	77
110	Theoretical predictions of the effect of cusp and dayside precipitation on the polar ionosphere. Journal of Geophysical Research, 2001, 106, 28857-28865.	3.3	26
111	Emission of OI(630 nm) in proton aurora. Journal of Geophysical Research, 2001, 106, 141-148.	3.3	33
112	Response of the upper atmosphere to auroral protons. Journal of Geophysical Research, 2001, 106, 127-139.	3.3	43
113	The profile of the hydrogen H <sup>+</sup> emission line in proton aurora. Journal of Geophysical Research, 2001, 106, 23-31.	3.3	55
114	Introduction to special section: Proton precipitation into the atmosphere. Journal of Geophysical Research, 2001, 106, 1-6.	3.3	42
115	The Ionosphere of Titan: Ideal Diurnal and Nocturnal Cases. Icarus, 1999, 140, 92-105.	2.5	77
116	Magnetic mirroring in an incident proton beam. Journal of Geophysical Research, 1999, 104, 4447-4455.	3.3	30
117	Ionization by energetic protons in Thermosphere-Ionosphere Electrodynamics General Circulation Model. Journal of Geophysical Research, 1999, 104, 27973-27989.	3.3	30
118	Proton-electron precipitation effects on the electron production and density above EISCAT (Tromsø) and ESR. Annales Geophysicae, 1998, 16, 1299-1307.	1.6	19
119	Proton transport model in the ionosphere. 2. Influence of magnetic mirroring and collisions on the angular redistribution in a proton beam. Annales Geophysicae, 1998, 16, 1308-1321.	1.6	27
120	Proton transport model in the ionosphere: 1. Multistream approach of the transport equations. Journal of Geophysical Research, 1997, 102, 22261-22272.	3.3	46
121	Quasiperiodic 45-60 s fluctuations of VLF signals propagating in the Earth-ionosphere waveguide: A result of pulsating auroral particle precipitation?. Journal of Geophysical Research, 1997, 102, 347-361.	3.3	4
122	Enhanced incoherent scatter plasma lines. Annales Geophysicae, 1996, 14, 1462-1472.	1.6	13
123	Enhanced incoherent scatter plasma lines. Annales Geophysicae, 1996, 14, 1462.	1.6	8
124	First in-situ detection of the cometary ammonium ion NH <sub>4</sub> <sup>+</sup> (protonated ammonia NH <sub>3</sub> ) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 147 Society, 0, , stw3370.	4.4	6
125	A collisional test particle model of electrons at a comet. Monthly Notices of the Royal Astronomical Society, 0, , .	4.4	1
126	ON THE IMPORTANCE OF THE CROSS-BODY APPROACH IN PLANETARY AERONOMY. , 0, , 239-248.		0